

- A1
1. A peptide [that comprises]comprising a modified tandem GnRH decapeptide sequence [which allows for a]capable of inducing an immunogenic response that allows for discrimination between different types of GnRH[, preferably between GnRH-I and GnRH-II].
  2. A peptide [that comprises]comprising a modified tandem GnRH decapeptide sequence which allows for a testosterone level that is essentially non-detectable after vaccination with the peptide in a suitable dosage.
  3. A peptide according to claim 1[ or 2 that comprises]comprising at least two coupled GnRH decapeptide sequences[, optionally coupled through a spacer], wherein at least one of the amino acids of said coupled GnRH decapeptide sequences is replaced by a different amino acid.
  4. A peptide according to claim 1[, 2 or 3], wherein [the]said different amino acid is Ala.
  5. A peptide according to claims 1[-4] wherein [the]said peptide is selected from the group consisting of:  
SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.
  6. A peptide according to claims 1[-5] that is dimerised.
  7. A peptide according to claim 6, conjugated with a carrier compound.
  8. A peptide according to claim 7, wherein [the]said carrier compound is a protein.
  9. A peptide according to claim [7 or ]8, wherein [the]said carrier compound is ovalbumin.

A1  
Cont'd  
*Sgt*  
A2  
Sgt  
F2

10. A vaccine comprising a peptide in accordance [to any of]with claim[s] 1[-9].

11. A vaccine according to claim 10, [additionally]further comprising an adjuvant.

12. A vaccine according to claim 11, wherein [the]said adjuvant is an oil phase of an emulsion selected from the group consisting of a water-in-oil emulsion [or]and a double oil emulsion.

Note: in the originally filed claim set, two claims were numbered 13. Please amend the first claims 13 as follows:

13. A method for vaccinating a mammal against GnRH-I with a vaccine according to [claims]claim 10[-12].

14. A method for vaccinating a mammal according to claim 13[ or 14], wherein [the]said vaccine is administered in a single dose.

15. A vaccine according to [claims 10-12]claim 10 that is sufficiently active for administration in a single dose for the essential immunocastration of pigs.

16. A method to effect one or more reproductive or behavioral characteristics of a mammal, characterized in that said mammal is vaccinated in accordance with [claims]claim 13[-15].

17. A method for immunizing a mammal against GnRH,[ preferably GnRH-I,] comprising vaccinating the mammal with a vaccine according to claim 16.

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Cmt &*
18. A method to immunocastrate a pig, characterized in that said pig is vaccinated in accordance with claim 17[ or 18].
19. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immunerresponse is elicited to a peptide according to [claims]claim 1[-9].
- Surey*
20. A vaccine against GnRH-II comprising a peptide according to [claims]claim 1[-9].
21. Composition for the treatment of prostate cancer comprising a peptide according to [claims] 1[-9].
22. Use of a peptide according to [claims]claim 1[-9] in the preparation of a pharmaceutical composition.
23. Use of a peptide as defined in [claims]claim 1[-9] for the preparation of a medicament for the treatment of prostate cancer.
24. Method for the treatment of prostate cancer comprising administration of a suitable dose of a composition comprising a peptide that elicits an at least an immunogenic response against GnRH-II.

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Please renumber the second claim 13 as 25 and amend as follows: [13]25. A method according to claim 13, wherein [the]said vaccine is a selective vaccine for vaccination against GnRH-I.

Please add the following new claims:

*AS*  
*SAC*  
26. A peptide according to claim 3 wherein said different amino acid is Ala.

27. A peptide according to claims 3 wherein said peptide is selected from the group consisting of:  
SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.

28. A peptide according to claims 4 wherein said peptide is selected from the group consisting of:  
SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.

29. A peptide according to claims 1 that is multimerised.

30. A peptide according to claims 3 that is dimerised.

*31* 40. A peptide according to claims 3 that is multimerised.

*32* 50. A peptide according to claims 4 that is dimerised.

*33* 60. A peptide according to claims 5 that is dimerised.

*SAC* *34* 61. A vaccine comprising a peptide in accordance with claim 1.

- Sul 35*  
*F 34*
36. A vaccine comprising a peptide in accordance with claim 3.
37. A vaccine comprising a peptide in accordance with claim 5.
38. A vaccine comprising a peptide in accordance with claim 6.
39. A vaccine comprising a peptide in accordance with claim 7.
40. A vaccine comprising a peptide in accordance with claim 9.
41. A method for vaccinating a mammal against GnRH-I with a vaccine according to  
claim 11.
42. A method for vaccinating a mammal against GnRH-I with a vaccine according to  
claim 12.
43. A vaccine according to claim 11 that is sufficiently active for administration in a  
single dose for the essential immunocastration of pigs.
44. A vaccine according to claim 12 that is sufficiently active for administration in a  
single dose for the essential immunocastration of pigs.
45. A method to effect one or more reproductive or behavioral characteristics of a  
mammal, characterized in that said mammal is vaccinated in accordance with claim 14.
46. A method to effect one or more reproductive or behavioral characteristics of a  
mammal, characterized in that said mammal is vaccinated in accordance with claim 15.

~~4/1~~ 3. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immuneresponse is elicited to a peptide according to claim 3.

~~4/1~~ 4. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immuneresponse is elicited to a peptide according to claim 5.

~~4/1~~ 5. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immuneresponse is elicited to a peptide according to claim 6.

~~4/1~~ 6. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immuneresponse is elicited to a peptide according to claim 7.

~~5/0~~ 7. Antibodies against GnRH-II obtainable by a method comprising a step wherein an immuneresponse is elicited to a peptide according to claim 9.

*Sue* ~~5/1~~ 8. A vaccine against GnRH-II comprising a peptide according to claim 5.

*F 7/2* 9. Composition for the treatment of prostate cancer comprising a peptide according to claim 5.

~~5/3~~ 10. Use of a peptide according to claim 5 in the preparation of a pharmaceutical composition.

~~5/4~~ 11. Use of a peptide as defined in claim 5 for the preparation of a medicament for the treatment of prostate cancer.